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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/748,490	12/26/2000	Wataru Hisada	52433/622	2859

26646 7590 04/11/2003

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EXAMINER

TALBOT, BRIAN K

ART UNIT

PAPER NUMBER

1762

DATE MAILED: 04/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/748,490

Applicant(s)

HISADA ET AL.

Examiner

Brian K Talbot

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 1762

1. The amendment filed 2/7/03 has been considered and entered. Claims 1-11 have been canceled. Claims 12-21 have been added and are the only remaining claims present in the application.

2. In light of the amendment filed 2/7/03, the 35 USC 103 rejections over claims 1-11 has been withdrawn. The 35 USC 112 second paragraph rejections have been withdrawn.

Claim Rejections - 35 USC § 103

3. Claims 12,13 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted state of the art (specification, pgs. 1-2) in combination with Omori et al. (6,015,586).

Applicant's admitted state of the art (specification, pgs. 1-2) teaches coating carbon, stainless steel and aluminum separators for fuel cells with a precious metal.

Applicant's admitted state of the art (specification, pgs. 1-2) fails to teach coating the precious metal by "impinging a core particle having a coating of a precious metal" to the separator which upon impacting would result in transfer of the precious metal".

Omori et al. (6,015,586) teaches cold dry plating process for forming a zinc coating on a substrate by impinging iron particles having encapsulated thereon a zinc alloy coating. The particle size is 40-2000 microns. The Vickers hardness is about 780 HV. The speed of the particles is 30-100 m/s.

Art Unit: 1762

With regards to the “variable” of the process, speed of particles, size of particles, specific gravity of particles, etc., it is the Examiner’s position that these are all “result effective variable” which are “optimized” by a skilled practitioner in the art depending upon the desired end product. It has been well settled that the “optimization” of well know “result effective variables” is deemed as an obvious modification of the art absent a showing of unexpected results.

Claims 14,16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant’s admitted state of the art (specification, pgs. 1-2) in combination with Omori et al. (6,015,586) further combination with EP-911425 A1.

Features described above are incorporated here.

Applicant’s admitted state of the art (specification, pgs. 1-2) in combination with Omori et al. (6,015,586) fails to teach the various claims “projection techniques”, i.e. air, water and inert gas.

EP-911425 A1 teaches a coating technique whereby particles are impinged to a substrate by cold gas spraying with a variety of mediums including, air, inert gases and water vapor.

Therefore, it would have been obvious at the time the invention was made to have modified Applicant’s admitted state of the art (specification, pgs. 1-2) in combination with Omori et al. (6,015,586) by substituting any one of the “carriers” detailed by EP-911425 A1 with the expectation of achieving similar results.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant’s admitted state of the art (specification, pgs. 1-2) in combination with Omori et al. (6,015,586)

further combination with EP-911425 A1 still further in combination with Singer et al. (5,516,586) or Babecki et al. (3,754,976).

Features described above are incorporated here.

Applicant's admitted state of the art (specification, pgs. 1-2) in combination with Omori et al. (6,015,586) fails to teach the "projection technique of an impeller".

Singer et al. (5,516,586) or Babecki et al. (3,754,976) both teach utilizing a "wheel" to propel the particles against a substrate to impart a coating thereon.

Therefore, it would have been obvious at the time the invention was made to have modified Applicant's admitted state of the art (specification, pgs. 1-2) in combination with Omori et al. (6,015,586) by substituting an impeller as evidenced by either Singer et al. (5,516,586) or Babecki et al. (3,754,976) with the expectation of achieving similar results.

Response to Amendment

4. Applicant's arguments with respect to claims 12-21 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argued that the secondary references fail to teach the hardness of the particles to that of the substrate, and the coating materials utilized.

The Examiner disagrees. The rejection of record is based upon a combination of references with the primary reference only lacking the coating technique of "cold welding". The

Art Unit: 1762

numerous secondary references teach that this technique, also known as cold welding, is commonplace in the art of coating. Hence, one skilled in the art at the time the invention was made would have had a reasonable expectation of achieving similar success with such known coating deposition techniques. In addition, the references teach particles with similar hardness, size and speed of impingement.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K Talbot whose telephone number is (703) 305-3775. The examiner can normally be reached on Monday-Friday 6AM-3PM.

Art Unit: 1762

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P Beck can be reached on (703) 308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3775.



Brian K Talbot
Primary Examiner
Art Unit 1762

BKT
April 8, 2003